

Remarks

In view of the amendments to claims herein the claims now pending are claims 91-134; claims 1-90 are cancelled without prejudice.

The current claims are substantially the same as the claims allowed in the corresponding application EP 1 545 893 B1 in the European Patent Office, except that one multiple dependency claim is replaced by single dependency claims and a few claims are cancelled.

In the EP prosecution of said EP 1 545 893 B1 application six prior art references were cited, namely

D1	EP	1101624
D2	EP	1112856
D3	EP	0803374
D4	EP	4460637
D5	FR	2531731
D6	EP	758696

Lack of novelty and lack of inventiveness was initially found in said EP prosecution for the initially filed claims 1, 2, 5-8, 10-17, 25 and 42. Particular reference was made to the documents D1-D6.

Claim 20 in the EP application was not mentioned in the European office action, thus novelty as well as inventiveness of the subject matter of this claim, and correspondingly also of newly submitted claim 91 in the present application (which incorporates the features of originally filed claim 20), was actually not questioned in said EP prosecution.

For the sake of completeness however, the problem-solution approach is presented here to illustrate novelty and inventiveness of the presently proposed claim 91, which led

to the successful grant in the European prosecution:

It seems to be most appropriate to choose as the closest state-of-the-art document FR 2531731 (D5). The difference between the disclosure of D5 and newly submitted claim 91 is, on the one hand, a difference in the particle size distribution of the calcium carbonate. The following shall be noted particularly in respect of D5: In table 1 of the document D5 it is mentioned that 80% of calcium carbonate is present, wherein 68% of this calcium carbonate is smaller than 1 μ , this does not allow to state that 54 parts of calcium carbonate have 100% of particles with a diameter of below 1 μ and that therefore an even bigger part is present with respect only to the pigment part. As a matter of fact, it is the actual distribution of the pigment sizes in the coating which gives rise to a specific porosity, and since there is no disclosure of a specific porosity to be found in D5, the subject matter of claim 91 at least differs from D5 in a specific value of the porosity and in the composition of the pigment part of the top coating.

Apart from that, newly submitted claim 91 differs from the document D5 in that in addition to the top coating there is a second coating directly beneath the top coating.

The specific combination of a top coating and a second coating below leads to the desired porosity structure, and to the corresponding ink drying behaviour as outlined and illustrated by the examples. Specific reference is made to page 9 of the originally filed description, last paragraph to page 11, first paragraph, in respect of the advantages achieved by the combination of the two layers with the specific composition of the corresponding formulations.

So the document D5 discloses a single top layer comprising a pigment part comprising 50-100 part of a fine particulate carbonate with a particle size distribution of 55-95%, of particles smaller than one micrometer. Therefore, in order to distinguish from the disclosure of D5 (as well as from the other document on file), it is sufficient if the

second layer is explicitly stated to be composed of the individual parts as defined in claim 91, as the document D5 neither discloses a second layer as such, let alone discloses or suggests a second layer consisting of the individual constituents as outlined in claim 91.

Just taking the document D5 alone, which only describes one *single* coating on a substrate, which does not disclose the formulation of the top coating according to claim 91, and which does not disclose a specific porosity, these differing features are not obvious modifications of the disclosure of D5. There is no incentive disclosed in D5 to modify the formulation in that a specific particle size distribution is chosen, nor is there any incentive to combine it with a second layer, let alone to combine it with a second layer of a very specific formulation as defined in claim 91.

Looking at the other documents on file, specifically at those explicitly mentioned above, one notes the following:

In the document D1 in paragraphs 0049-0051, a very general disclosure of the potentially possible presence of several coating layers can be found. There is however absolutely no information about the formulation of such a second or even third coating, so it may well be for example a sizing layer without any pigment or the like. Furthermore, D1 does not comprise any incentives why such an additional layer could be beneficial in terms of the achievable porosity. Therefore also the combination of D5 with the disclosure of D1 does not render the subject matter of newly submitted claim 91 obvious.

In the document D2 there is no mention of more than one coating layer, let alone a specific formulation of such an additional coating layer. Clearly therefore also the combination of D5 with D2 cannot render the subject matter of newly submitted claim 91 obvious.

In the document D3 mention is made of a multilayer structure, for example on page 9: 12-26. However, first of all this document, which comes from the field of inkjet recording substrates, which are not at the same time as the ones disclosed in D5, would not have been taken into account by the person skilled in the relevant art. In addition to that, also here no information about the specific composition of such a second layer is given, let alone of the nature of the chosen pigments, their particle size distributions, etc. Since the document D3 furthermore does not disclose a top coating composition which is similar to the one as disclosed in D5, clearly therefore the combination of D5 with the document D3 does not render the subject matter of newly submitted claim 91 obvious.

In the document D4 there is mention of a second layer (see for example figure 2, column 6: 40-46). Again however, the top coating formulation of the disclosure of D4 is completely different from the one as given in D5 and also different from the one as to be found in claim 91, and the document D4 is furthermore silent about the specific composition of such a second coating, even more so about the *type* of pigments to be chosen, and there is no mention of specific *particle size distributions* of such pigments. Clearly therefore, a combination of the documents D5 and D4 cannot render the subject matter of newly submitted claim 91 obvious.

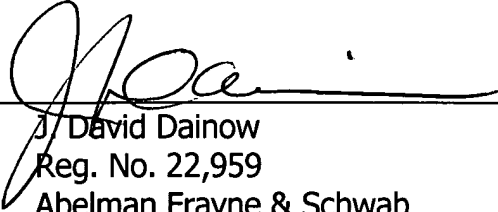
In the document D6 there is no mention of an additional second layer underneath the top layer at all, so the combination of D5 with D6 cannot render the subject matter of newly submitted claim 91 obvious.

Therefore, the subject matter of newly submitted claim 91 is new and inventive, and there is corresponding novelty and inventiveness of the dependent claims referring to claim 91.

The Examiner is invited to contact the undersigned counsel directly by phone or e-mail, if there are any questions or suggestions for further amendments that would place these claims in condition for allowance.

Respectfully submitted,

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